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PATENT & TRADEMARK OFFICE

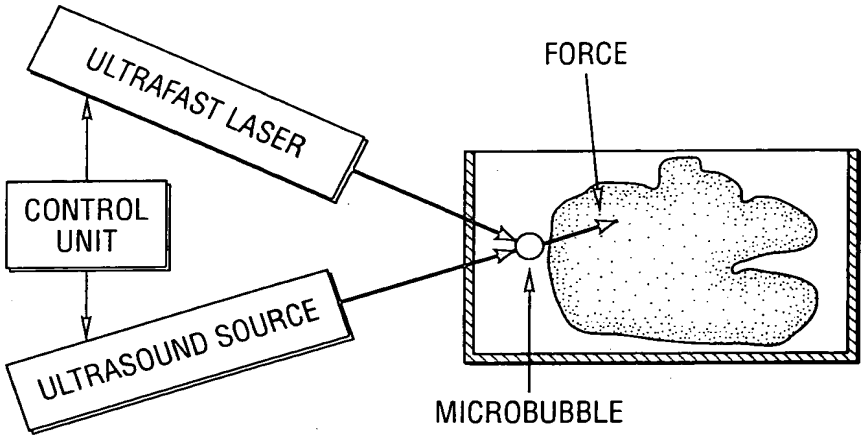

Fig. 1

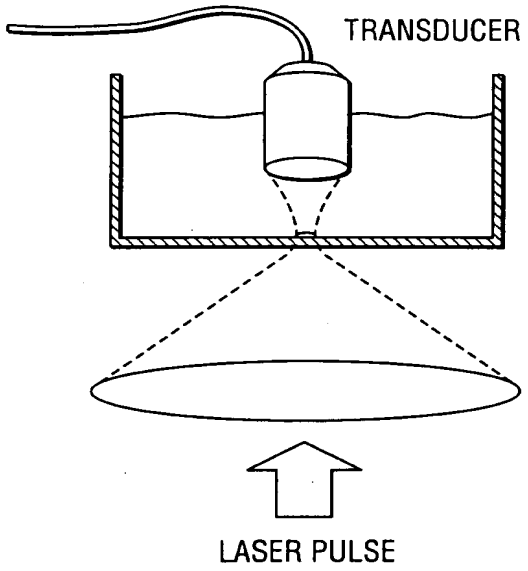

Fig. 2

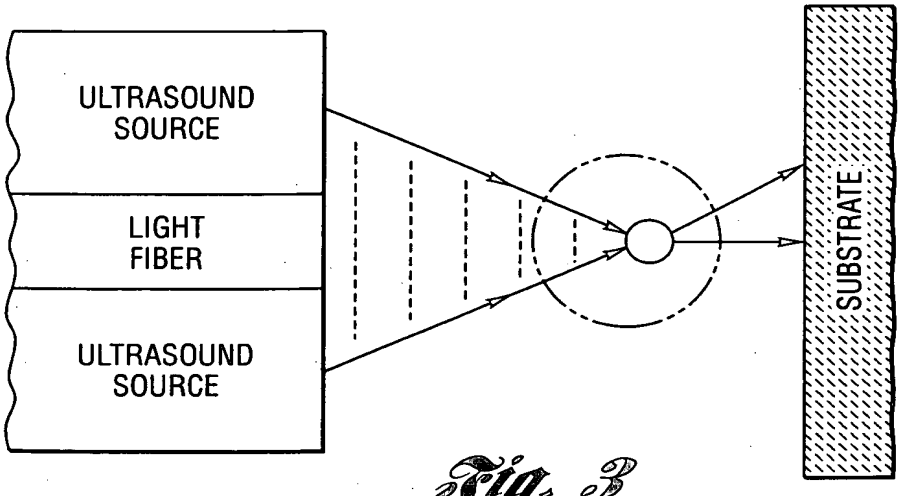

Fig. 3

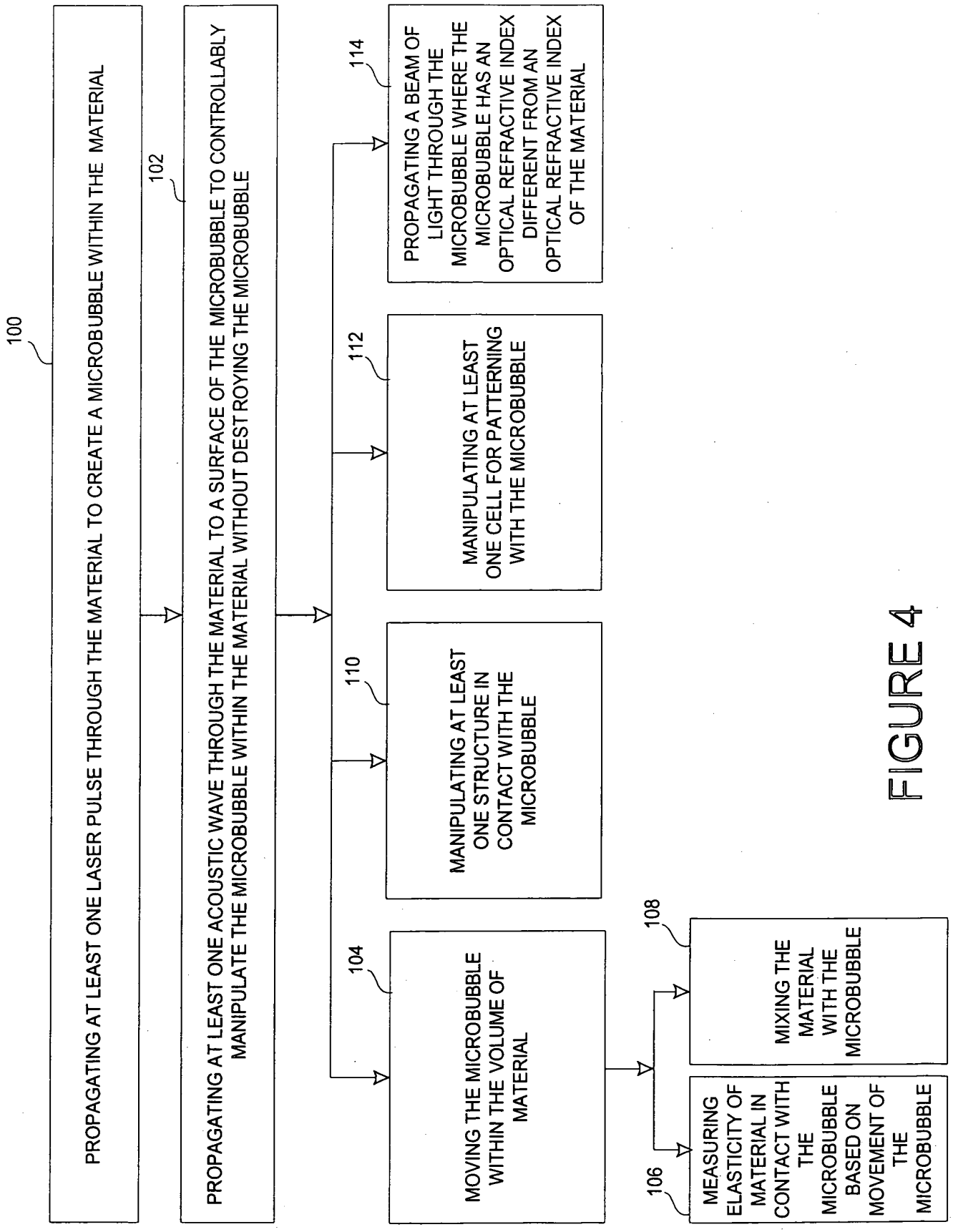
100
PROPAGATING AT LEAST ONE LASER PULSE THROUGH THE MATERIAL TO CREATE A MICROBUBBLE WITHIN THE MATERIAL
102
PROPAGATING AT LEAST ONE ACOUSTIC WAVE THROUGH THE MATERIAL TO A SURFACE OF THE MICROBUBBLE TO CONTROLLABLY MANIPULATE THE MICROBUBBLE WITHIN THE MATERIAL WITHOUT DESTROYING THE MICROBUBBLE
104
MOVING THE MICROBUBBLE WITHIN THE VOLUME OF MATERIAL
106
MEASURING ELASTICITY OF MATERIAL IN CONTACT WITH THE MICROBUBBLE BASED ON MOVEMENT OF THE MICROBUBBLE
108
MIXING THE MATERIAL WITH THE MICROBUBBLE
110
MANIPULATING AT LEAST ONE STRUCTURE IN CONTACT WITH THE MICROBUBBLE
112
MANIPULATING AT LEAST ONE CELL FOR PATTERNING WITH THE MICROBUBBLE
114
PROPAGATING A BEAM OF LIGHT THROUGH THE MICROBUBBLE WHERE THE MICROBUBBLE HAS AN OPTICAL REFRACTIVE INDEX DIFFERENT FROM AN OPTICAL REFRACTIVE INDEX OF THE MATERIAL

FIGURE 4

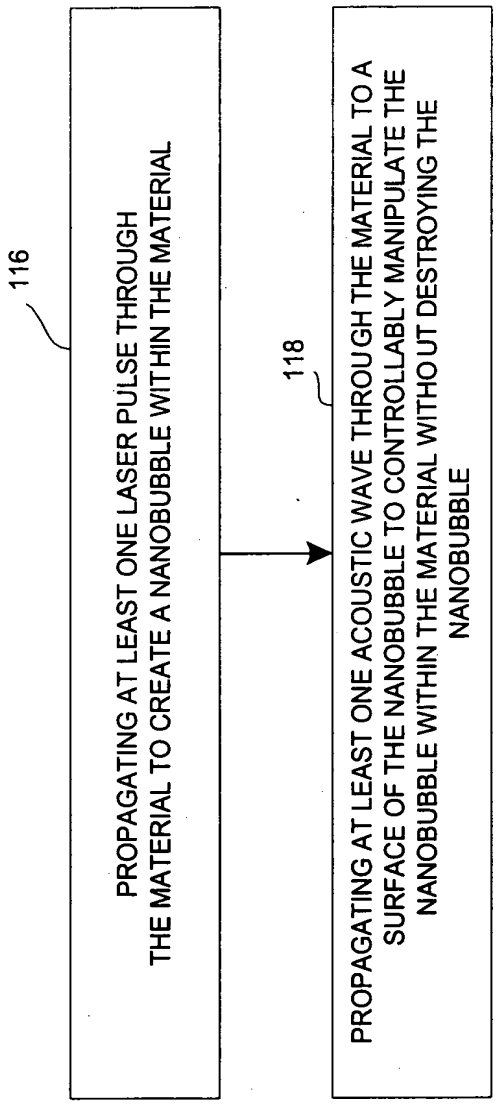
116
PROPAGATING AT LEAST ONE LASER PULSE THROUGH THE MATERIAL TO CREATE A NANOBUBBLE WITHIN THE MATERIAL
118
PROPAGATING AT LEAST ONE ACOUSTIC WAVE THROUGH THE MATERIAL TO A SURFACE OF THE NANOBUBBLE TO CONTROLLABLY MANIPULATE THE NANOBUBBLE WITHIN THE MATERIAL WITHOUT DESTROYING THE NANOBUBBLE

FIGURE 5